

Thomas Stephen Felix

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PROFILE

An ambitious roboticist looking to contribute to a mission-driven company dedicated to solving the most pressing challenges in robotics. Reinforced with over eight years of experience in C++, and a deep desire to develop state-of-the-art model and learning-based control strategies to solve real-world applications.

EDUCATION

University of Pennsylvania

Master of Science in Engineering, Robotics, GPA 3.85/4.00

Coursework: Principles of Deep Learning, Physical Intelligence, Modern Convex Optimization.

Philadelphia, PA

Aug 2024 – May 2026

Nanyang Technological University

Bachelor of Engineering, Computer Engineering, GPA 4.30/5.00

Specialization: Artificial Intelligence and High-Performance Computing

Singapore, SG

Aug 2017 – May 2021

EXPERIENCE

Dynamic Autonomy and Intelligent Robotics Lab

Graduate Research Assistant

Philadelphia, PA

May 2025 – Present

- Spearheaded the migration of C3, a multi-contact MPC control algorithm, into a standalone library for modularity, reusability, and enhanced collaboration.
- Integrated the library to execute complex hybrid contact control examples using sampling-based strategies.

Eureka Robotics

Robotics Software Engineer

Singapore, SG

Aug 2022 – Aug 2024

- Collaborated with a diverse, cross-functional team spanning multiple countries and specializations.
- Led end-to-end hardware integration efforts, incorporating cameras, sensors, end-effectors, and robotic arms.
- Maintained a robust CI/CD pipeline to facilitate code formatting, testing, and multi-platform packaging.

Robert Bosch Security Solutions Pte Ltd

Junior Embedded Software Engineer

Singapore, SG

Aug 2021 – Aug 2022

- Maintained and debugged existing controllers written in Assembly and Embedded C for current customers.
- Developed and tested new controller components in C++ with RTOS to meet the demands of a growing market.

PROJECTS

Feasible Robot Trajectory Generator using PPO, TD3 and Behavior Cloning

Mar 2025 – May 2025

Learning in Robotics

Balance 3D Inverted Pendulum on Quadrotor using MPC and Direct Collocation

Oct 2024 – Dec 2024

Control and Optimization with Applications in Robotics

SKILLS

Programming Languages: C++, Python, MATLAB, CUDA C, Embedded C, Java

Frameworks: ROS, Drake, MuJoCo, Docker, Jenkins, Bazel, Torch, PyTest, GoogleTest

Languages: English (fluent), Hindi, Malayalam (intermediate), Arabic, French and Mandarin (elementary)

ONLINE CERTIFICATIONS

Algorithms Specialization, Stanford Online

2022

Robotics Specialization, University of Pennsylvania

2023